

MCTIGHE AND SEIF: CRITICAL THINKING AND TEACHING FOR UNDERSTANDING- PART I



by **McTighe and Seif** on **June 04, 2014**

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Jay McTighe has co-authored ten books including the best-selling *Understanding by Design* series with Grant Wiggins. He has written more than thirty articles and book chapters, published in a number of leading journals, including *Educational Leadership* (ASCD), and *The Developer* (National Staff Development Council).

Elliott Seif, Ph.D. is an educational consultant, author, and advocate for improving educational practice in urban schools. He was a social studies teacher, a Professor of Education at *Temple University*, the Director of Curriculum and Instruction Services for the Bucks County, Pennsylvania Intermediate Unit, an Educational Service Agency, and an *Understanding by Design* trainer.

Driving Question: What makes the most meaningful education for 21st century learners?

To answer this essential question, our immediate response is "teaching for understanding." Three guiding questions accompany that response. "What is teaching for understanding?" "Why bother?" and "How?"

What is understanding?

When someone truly understands, they can *do* or perform these six behaviors which are the principal *facets* of understanding. They can:

Explain concepts, principles and processes by putting it their own words, teaching it to others, justifying their answers and showing their reasoning.

Interpret by making sense of data, text and experience through images, analogies, stories and models.

Apply by effectively using and adapting what they know in new and complex contexts.

Demonstrate perspective by seeing the big picture and recognizing different points of view.

Display empathy by perceiving sensitively and walking in someone else's shoes.

Have self-knowledge by showing meta-cognitive awareness and reflecting on the meaning of the learning and experience.

The six facets offer a framework for creating rich learning activities that develop and deepen students' understanding and allow for the transfer of learning. They can also be used to develop assessments that determine whether students understand concepts and can apply learning to new situations.

Why should we teach for understanding?

There are three principle reasons unique to this time.

1. The nature of the modern world that today's students will enter.

The world is increasingly interconnected and rapidly changing, offering new potentials and problems. Search engines, computers and smartphones give most people increased and immediate access to huge amounts of information. E-mail, Twitter, Facebook and soon-to-be invented technologies enable instantaneous communication with people throughout the globe. The highly complex job market, with its array of novel and changing careers, calls for creative, innovative individuals who can think critically and apply their learning to new situations while functioning as continuous, lifelong learners.

2. The knowledge explosion.

This current reality is complicated by the fact that the knowledge base in many fields continues to expand, and most teachers today find that there is too much content to teach and not enough time to teach it all! The present curriculum simply contains too many topics and is often fragmented, without clear connections from one topic or one level to the next. The pressures of content

coverage, **often driven by jam-packed** Common Core and other state standards and **high stakes**, *standardized tests*, come at the expense of engaging learners in exploring concepts in depth, addressing complex issues and problems, or investigating interesting and important questions – many of the very skills and processes needed to succeed in the modern world.

3. Research on learning.

Teaching for understanding is reinforced by recent insights into how people learn, and our work as educators should be guided by the most current understandings about the learning process. Over the course of the past twenty years, research in cognitive psychology and neuroscience has significantly expanded our understanding of how people learn. This research supports a set of learning principles that emphasize the importance of constructing meaning and developing understanding.

How do we teach for understanding?

Teaching for understanding involves engaging learners in *meaning-making*. Meaning-making occurs when learners are given the opportunity to construct their own understanding around big ideas and essential questions. Observing young children helps us to understand how learners make meaning. They often ask questions that begin their learning process. They learn through physical and mental activity that helps them make connections and construct their own meaning

Young children's learning is mediated through critical thinking – asking questions, analyzing and interpreting what they see, putting ideas together, making inferences, trying to solve problems and learning to reason and strategize.

Moreover, learning for young children is often a social, collaborative process with adults and other children. Usually, the more opportunities there are for interaction, the greater the learning and understanding.

We encourage teachers to help students construct meaning by focusing learning around big ideas and essential questions. Big ideas and essential questions are chosen because they are fundamental to a discipline, provoke critical thinking, and support transfer of learning to new situations.

A history teacher may focus learning around the question, "How do we learn to live together in a diverse society?" and use the concept of *diversity* as a focus for learning.

A science teacher may concentrate on the question, "How do we know what to believe about a scientific claim?" and focus on the big idea of *scientific truth*.

An art teacher might focus on the question "What makes great art?" and concentrate on the big idea *artistic excellence*. A focus on a smaller number of core ideas allows for a greater emphasis on in-depth learning. In the words of Newmann, we should create a curriculum with a "sustained examination of a few topics rather than superficial coverage of many".

A variety of instructional activities encourage meaning-making. These include Socratic questioning and related inquiry approaches: classification and categorization of information and data, developing and testing hypotheses, conducting research, drawing conclusions, explaining results and using project and problem-based learning strategies.

Embedded in different curricula, the making of meaning may look differently. For instance:

- **Reading, Writing and Literature:** After reading several fables and studying their characteristics, students write a modern-day fable in order to learn about the characteristics of fables.
- **Geography:** To develop a proposed route for a continental highway across central Africa, students consider human and physical geography along with economic and political factors.
- **Mathematics:** Based on a building blueprint, students determine the amount of paint and cost estimates for painting the interior of a building.
- **Science:** Students design an experiment to test the capacity of different types of fabrics (e.g., cotton, wool, silk) for absorbing liquids.
- **Technology:** Students Create a YouTube tutorial to teach grandparents how to use Twitter or Facebook.
- **Visual Arts:** Students analyze murals as a pre-step to designing their own about their cultural heritage.

All In All

Teaching for understanding calls for the infusion of critical thinking into the curriculum. It calls for teachers to take an active, intentional role in developing the skills imbedded in the curriculum so that they truly think about and understand the depths of the

ideas. The end result? Deeper understanding for all students.

This post adapted and updated from Jay McTighe and Elliott Seif. *"Teaching for understanding: A meaningful education for 21st century learners."* in Teachers Matter (Spring 2014). Issue 24, 2014, pp 15-17. Christchurch, New Zealand: Spectrum Education

Up Next: What Critical Thinking and Teaching for Understanding Looks and Sounds Like: Part II

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